Digital Government Academy Course:
Enterprise Content Management

Presented by Interwoven, Inc, for the State of Washington

Welcome

- In this seminar, we'll be exploring issues pertaining to the State of Washington's content management project
- We have attendees from several agencies in the state government
- Our goal is to discover, examine and document the critical success factors for the State's content management project

Introductions

- Speaker: Tom Brown
  - Senior Consulting Manager, Interwoven
  - Started at Interwoven as a Consultant over 2.5 years ago
  - Now manage several large customers in Southern California eg. Toyota, DirecTV
- Agency introductions
  - Department name
  - Team members present

Seminar Schedule

- **Day 1: December 4, 2002**
  - Course Kickoff
  - ECM
  - TeamSite Templating
- **Day 2: December 11, 2002**
  - Develop-and-deploy
  - TeamSite in the Enterprise
  - Branching Structures
- **Day 3: December 18, 2002**
  - TeamSite Security
  - Workflow Scenarios
  - Designing a Workflow
- **Day 4: January 8, 2003**
  - Designing Data Capture Forms
  - Designing Presentation Templates
  - Re-use via Templating
- **Day 5: January 15, 2003**
  - TeamSite and Metadata
  - Finding your Assets
  - Supporting Personalization
  - Course Summary

Daily Activities

- Schedule:
  - Morning session from 9 am to noon
  - Lunch from noon to 1 pm
  - Afternoon session from 1 pm to 4 pm
- 3 or 4 topic presentations a day
- Each topic will include:
  - Presentation of concepts, with demonstrations if needed
  - Group-based action planning
  - Collective reviews and critiques of group action plans

Introductory Comments

- This seminar presents unique opportunities
  - Exploration of issues
  - Think before you leap
  - Implement for today--plan for tomorrow
  - Leverage experience of others

Exploration of Issues

- During this seminar, we'll take the time to think about your agency's content management requirements and challenges
- We'll compare our issues and find some that are unique and many that are shared
- By discovering them early, we can address them while we design the system and avoid costly and time-consuming changes later

Think Before you Leap...

- AKA "Ready...Fire!...Aim..."
- We have a rare opportunity to come together and apply our collective experiences and insights to a unified design
- A good design is the single most critical success factor in any complex project
- We need to make the most of this opportunity by
  - Staying focused
  - Being open to each other's ideas
  - Sharing ideas and giving constructive criticism

Implement for Today--Plan for Tomorrow

- Initial goal: create first design and implement
  - A plan is only useful if you *use* it
- In other words: don't over-design to start with
  - Keep it as simple as possible to start
  - Implement it early, in stages, and monitor
  - Refine and extend
- But as we plan, we think ahead to future needs
  - Keep plan open, flexible
  - Plan for extension and change
  - Avoid rigid thinking
  - "No plan survives contact with the enemy" –Von Moltke

Leverage Experience of Others

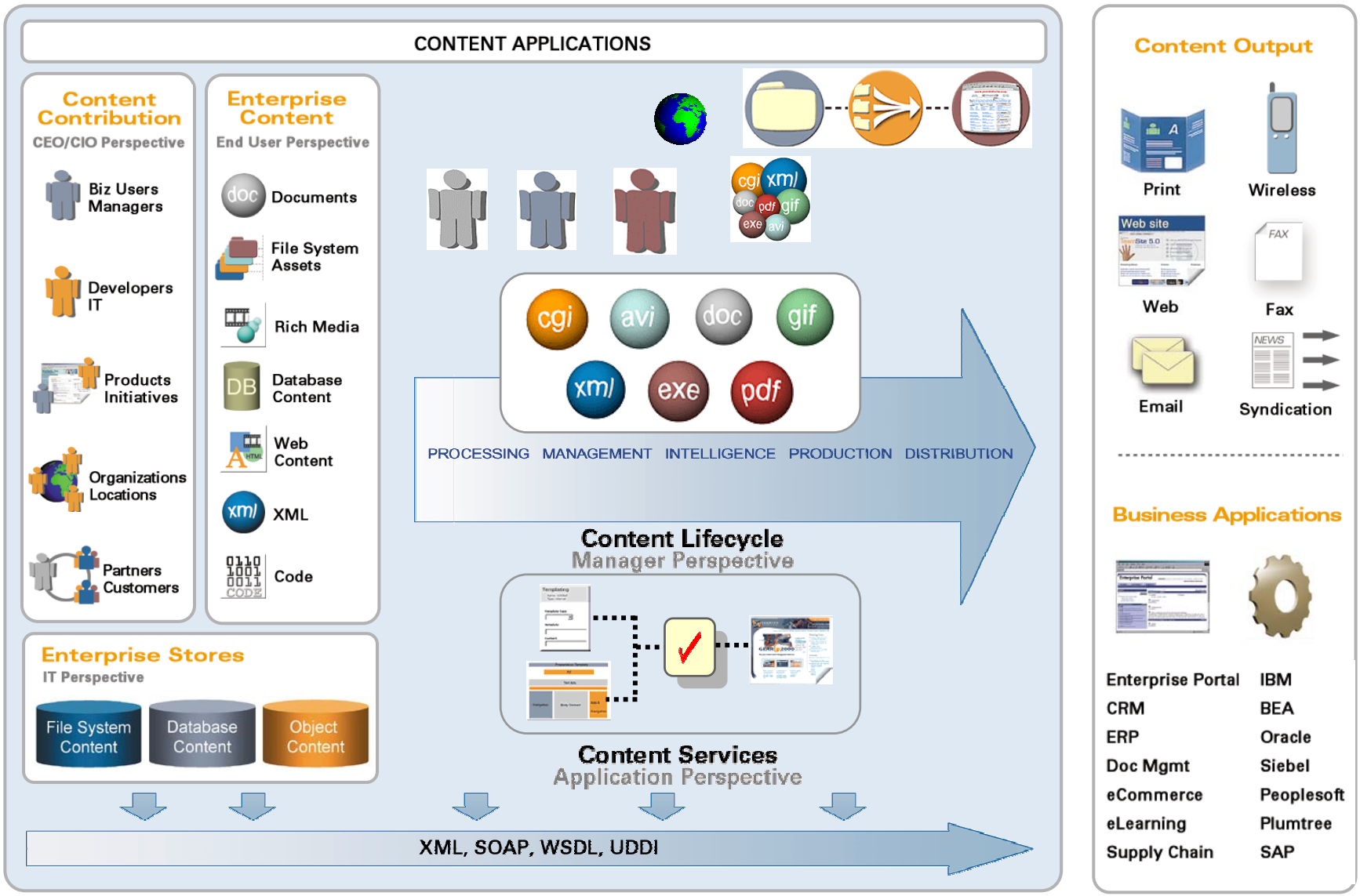
- There have been many other content management projects before yours
- During this seminar, we'll take advantage of the work done by others
- We'll see examples of the good, the bad and the ugly
- We'll choose what works best for this organization
- "Good designers create new plans, great designers steal proven plans"

Enterprise Content Management: Initial Requirements Analysis

Topic Objectives

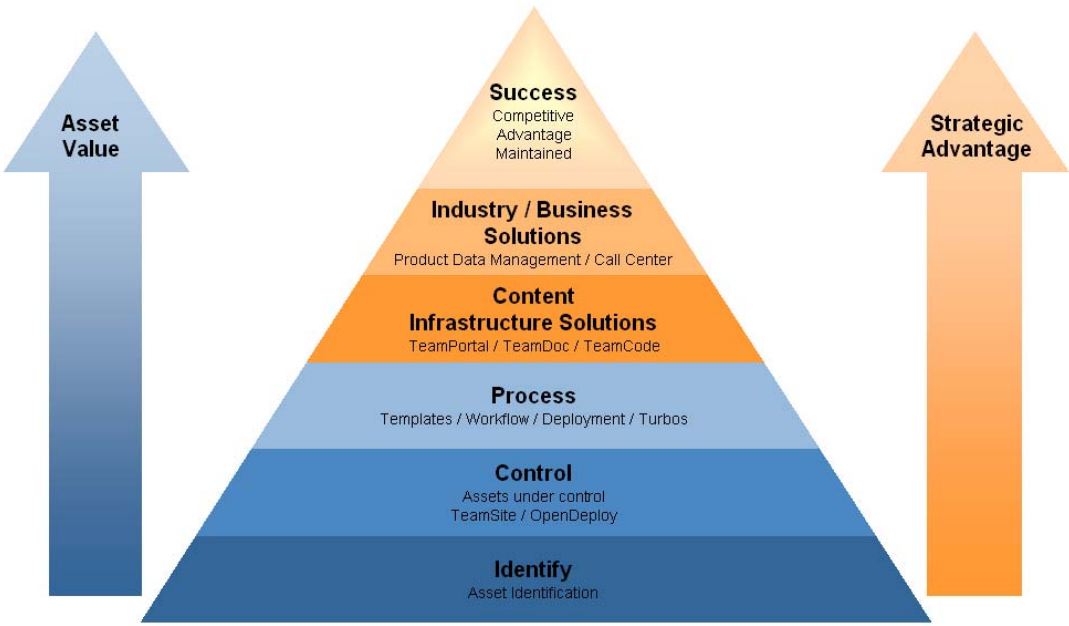
- In this topic, we'll cover:
  - Enterprise Content Management principles
  - Content management requirements gathering
- The action planning at the end of this topic will be:
  - Identifying your group's ECM goals and priorities
  - Listing the types of content assets your group handles
  - Identifying and diagramming some sample processes

Enterprise Content Management Capabilities

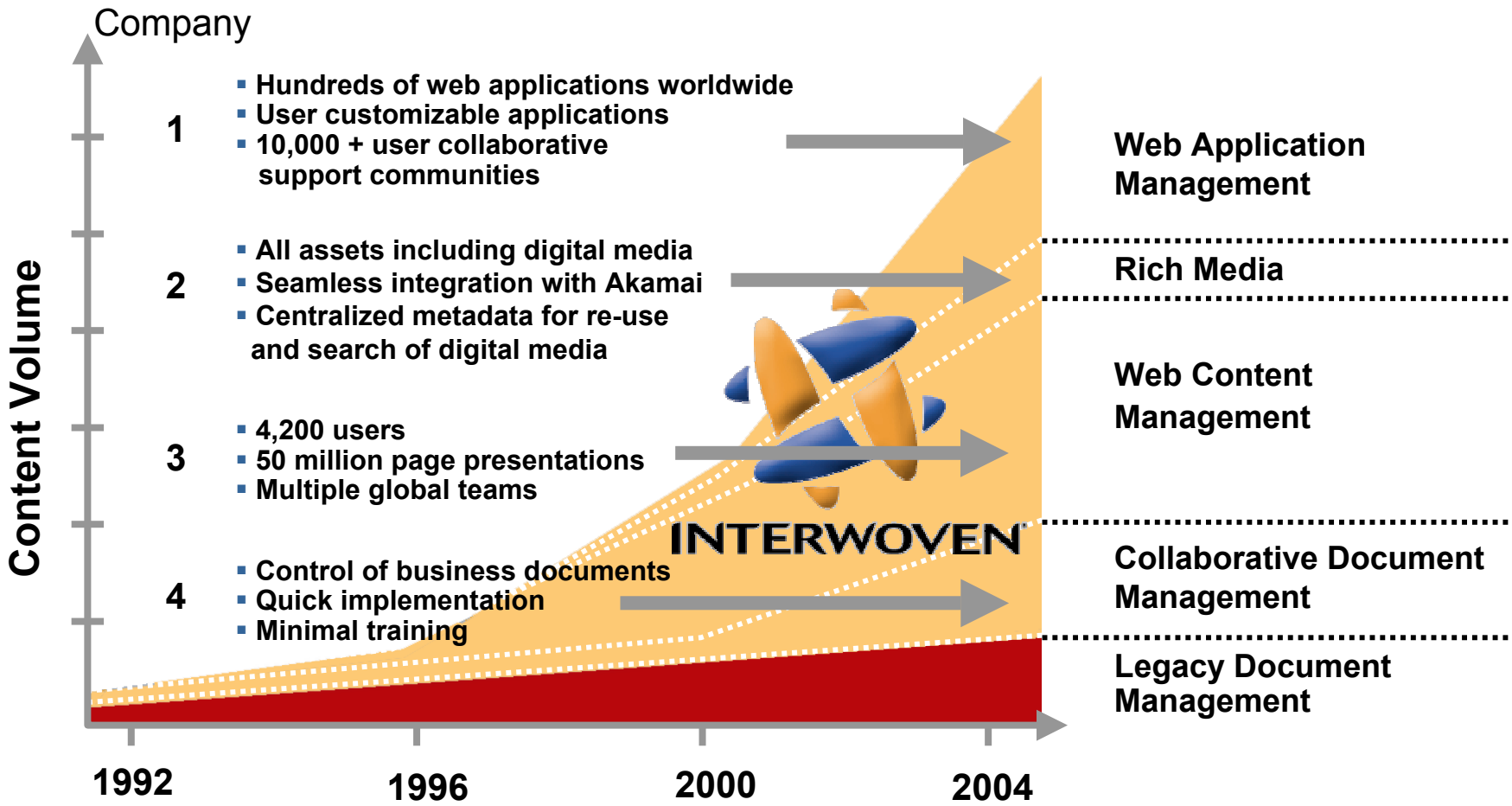


Transforming Content into Capital

- Strategy
- Infrastructure
- Implementation

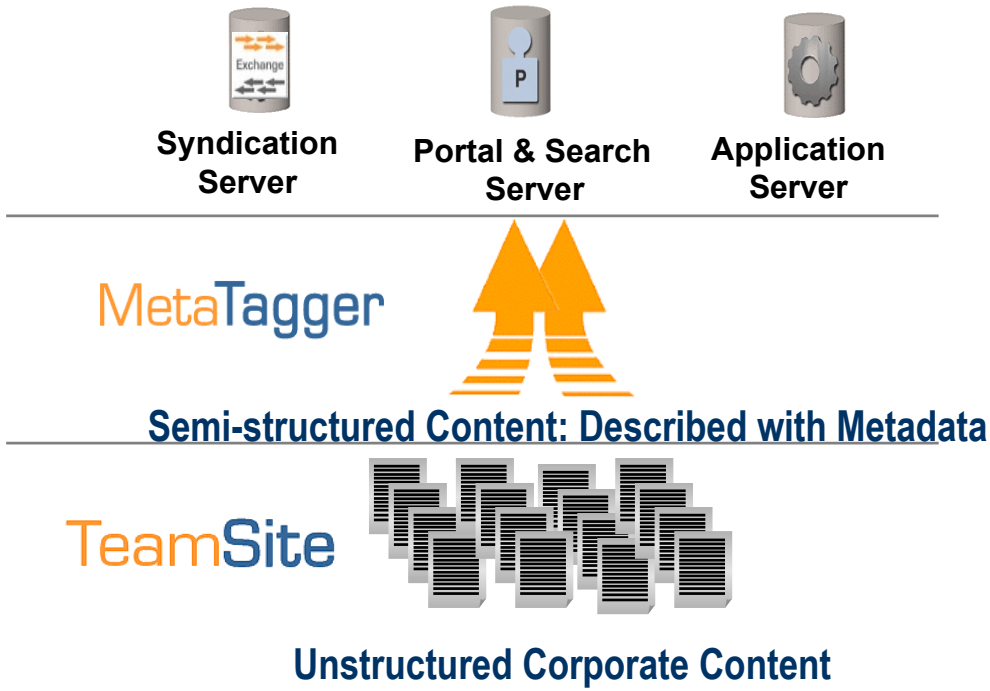


Enterprise Content Management Evolution



Why is Content Intelligence Critical in ECM?

- All initiatives require content with metadata. Applications are thirsty for structure.
- To be found and used, content must be organized and described. Tag it. Find it. Use it.
- Metadata is worth it's weight in gold, but is expensive and time consuming to write.



Without Content Intelligence, organizations cannot effectively utilize their enterprise content

Enterprise Content Management

Knowledge Workers

Remote

Individuals and Groups

DB

Scaling Content

Collaborate

Search

Regulate

Repurpose

Classify

Categorize

Publish

Distribute

Applications and Users

CRM

Customers

Enterprise Portals

Partners

WWW

Employees

Document Management

Web Enabled

ECM

- **Enterprise Content Management** (**ECM**): The application of content management principles to an entire corporate organization's content development process
- The State of Washington represents a large, complex enterprise
- What are the ECM goals for the State of Washington, and what it will look like?
- Let's review some ECM principles

Enterprise Content Management

- Enterprise Content Management is Interwoven's strategy for content management
- TeamSite and related products are used to implement an ECM system
- The TeamSite ECM environment provides:
  - **Asset control and security**
  - **Versioning support**
  - **Process control and collaboration**
  - **Development simplification**
  - **Content intelligence**
  - **Content distribution**

Assets

- **Asset**: A file that contains data important to your organization
- Examples:
  - **Web pages**
  - **Documentation files**
  - **Image files**
  - **Scripts or program code**
  - **Configuration files**
- TeamSite stores your assets safely and controls who can access or modify them

Asset Aggregation

- A part of asset control is the ability to group assets based on their role or relationship
- Examples of asset aggregation:
  - Files used to produce product manuals
  - Files on a web site
  - Source code for a programming project
- Each aggregate set represents a project, product, publication or other defined business goal
- The TeamSite server aggregates similar assets together by project, called **branches**

Access Control and Security

- An ECM system must provide security during all phases of content development and delivery
- Permission attributes can be assigned to assets to control who can read or change the assets
- The ECM system must also protect the content when it moves from point to point, making sure the content cannot be accessed by unauthorized people
- TeamSite provides robust access control via user login, **roles** assignment, and file permission control

Versioning Support

- Each time an asset changes in an ECM system a new **version** of the asset is created
  - Existing versions are never actually changed—instead, the new version supercedes the previous one
- Types of version management tasks:
  - Create new versions of assets
  - Compare different versions
  - If needed, revert assets back to previous versions
- TeamSite automatically protects existing versions of assets and creates new versions for you

Process Control

- An ECM system provides **process control**, enabling managers to coordinate and track the development of content
- Process control improves efficiency and reduces quality problems in the content development process
- Process control functions by establishing defined **workflows**, which can be modeled as flow charts showing the steps required to produce new versions
- Each step in the process can be assigned to one or more people, or can be automated
- TeamSite **Workflow** is an advanced process control system for content management

Development Simplification

- Often, the people in an organization who need to change content in a business product (such as a product guide, web site, or other publication) are not content developers themselves
- These people need tools that allow them to contribute content without requiring them to learn the details of content development
- For instance, a product manager should be able to update product information on a web site without needing to know how to edit HTML files
- TeamSite implements development simplification with **TeamSite Templating**

Content Intelligence

- Large projects require some methodology of finding, sorting, categorizing, and tagging the content with information that is used to manage the assets
- An ECM system should provide a way to tag assets with **metadata**, which means "data about data"
- For instance, a particular team may need to tag each file with:
  - Author name
  - Content description
  - Reason for the last change
- Both TeamSite and Interwoven MetaTagger provide metadata content intelligence tools

Content Distribution

- At the end of the development process, the content must be moved from the development environment to the production environment
- For instance:
  - PDF files must be delivered to a printing service
  - Web files must be transmitted to the public web server
  - Database records must be inserted into database servers
  - Program code must be compiled and handed off to the installation team
- Interwoven **OpenDeploy** integrates with TeamSite to distribute content to production

Analyzing ECM Requirements

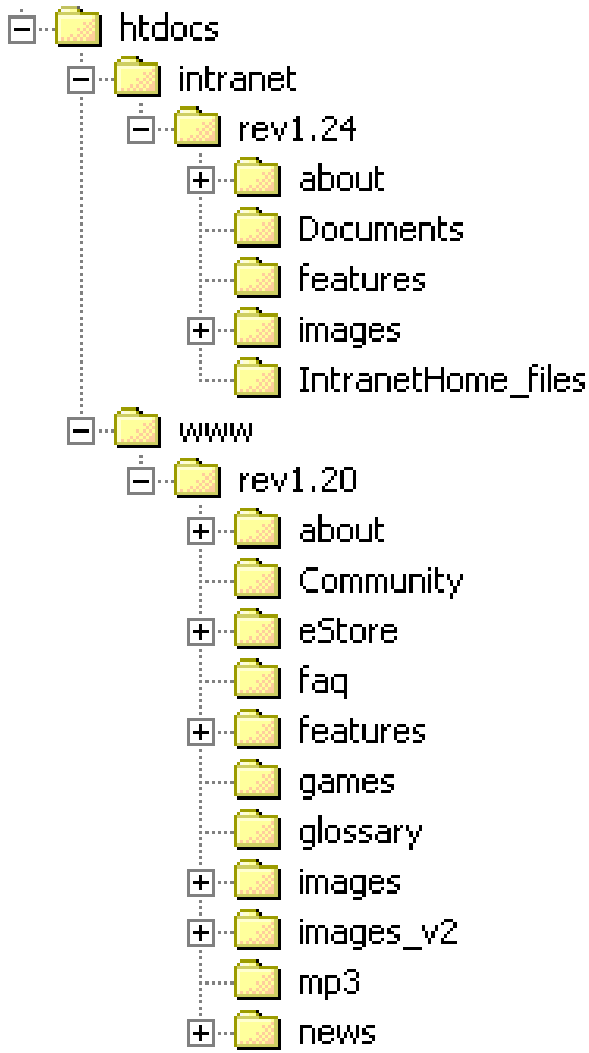
- Site ECM requirements for web content management fall into these areas:
  - Website and content
  - Organizational structure
  - Development process

Websites

- The following aspects of your web site and web servers require analysis and documentation
  - Website structure
  - Asset types
  - Web server
  - Browsers
  - Application servers
  - Network environment

Website Structure

- Websites may be single-server or multi-server rooted
- A website is a tree structure, with different subjects on separate branches of the tree
- The example at right shows that the web site is really two separate webs:
  - An intranet
  - A public www web
- Website structure will impact branching, workarea layout, proxy rules, and deployment configuration



Asset Types

- Examples of typical web site-related assets:
  - .htm/.html, .gif, .jpg/.jpeg
  - .asp, .jsp, .cgi
  - .class
  - .java, .c
  - .obj
  - .psp

Asset/Content Analysis

- Determine **what**, **who**, and **where**:
  - What kind of files are involved
  - Who needs to work on them
  - Where are they located on the web site
- This will help determine:
  - TeamSite branch and workarea structure
  - File permissions
  - Deployment configuration

Static v. Dynamic Content

- Document content types that require active execution of server-side code
  - Examples: SSI, CGI, ASP, JSP, etc
- These may require additional configuration for TeamSite virtualization

Asset Types

- Assets can be categorized as **versioned** and/or **deployed**
  - Versioned files are important assets and are managed with the TeamSite edit-submit-publish process
  - Deployed files are those that must be sent to the web site
- Most assets are versioned; many are deployed

Non-versioned Non-deployed	Versioned Non-deployed
Non-Versioned deployed	Versioned Deployed

Asset Types: Non-versioned Files

- An asset can be non-versioned if it is insignificant to the development process, or easily re-creatable
  - Examples: temporary files, debug logs, output from test runs, compiler transient files (.obj, etc)
- Asset types are made non-versioned by making them **private**
- "If in doubt, version it" is a good best practice

Asset Types: Non-deployed Files

- Many asset types in TeamSite workareas should not be deployed to the production web site:
  - TeamSite templating configuration files (the entire **templatedata** directory)
  - Compiler source code (**.java, .c, etc**)
  - Project management documents (to-do lists, change control documents, etc)
- Use deploy filtering to block files from deployment

Asset Types: Examples

- Examples:
  - **.html** files would be versioned and deployed
  - **.java** (Java source code) files would be versioned, but not deployed
  - **.class** (Java executable program) files *might* be versioned, and would be deployed
  - **.obj** (c compiled pre-linked) files would normally not be versioned or deployed

Asset Types: Documentation

- Use a table like this to document your asset and content analysis (we'll get to the rest of it soon):

Ext/dir	Ver	Dep	TS Read	TS Write	TS Exec	Web Read	Web Write	Web Exec
html	✓	✓						
java	✓	x						
class	x	✓						
tmp	x	x						
/template data	✓							

Web Server

- The web server architecture will impact your planning:
  - The host web server on the TeamSite server
  - The production web server[s] that you will be deploying to
- You must determine:
  - Host operating system brand and version
  - Authentication protocol (LDAP, Windows domain, UNIX passwd, etc)
  - Web server brand and version
  - Security configuration
  - Network configuration (IP address, host name, etc)

Browsers

- The browser used by TeamSite users in the organization must match TeamSite compatibility requirements
  - Netscape Communicator
  - Microsoft Internet Explorer
- **Best practice**: Currently (TeamSite 5.5.2), Microsoft IE 5.5 is preferred

Application Servers

- Besides the web server itself, many web sites rely on application servers:
  - Database server
  - J2EE (WebLogic, WebSphere, Dynamo, etc)
- These should be documented in your analysis
  - What types
  - How are they used
  - What asset types interact with them

Organizational Structure and Process

- Besides the web site and content analysis, you must also understand the organization and development process:
  - People (individuals and teams)
  - Process & procedures
  - Development tools
  - Current tools and practices

People

- Document the following:
  - Who is involved in content development
  - What groups do they fall into
  - What assets does each group work on
  - What part of the web site does each group work on

Process

- Document how content is developed and delivered to the web site
  - What kind of business events cause new content to be developed
  - What kinds of projects are performed
  - Who initiates the work
  - Who does the work
    - Is the work done by groups, or by individuals
  - Who approves the work
  - How often does this happen

Process: Business Events

- Events in business operations cause the need to add or change content on the server
- Examples:
  - New products or services
  - New information about the company
  - Defects found on web site
  - Web site improvement
  - Routine updates
  - Emergency updates
- Document what these events are, and a brief description
  - Later, when designing workflow, you'll need this information

Document the Current Process

- Before you can model a TeamSite workflow, you need to understand how content is being processed today (i.e., without TeamSite)
  - How do the workers edit web content
  - How do they assign and keep track of "to-dos"
  - Where do they "stage" work before posting it to the web site
  - How is work and approval routed
  - Where are old versions kept
  - How do they enforce standards and procedures

DSHS Example: Press Release—Process Notes

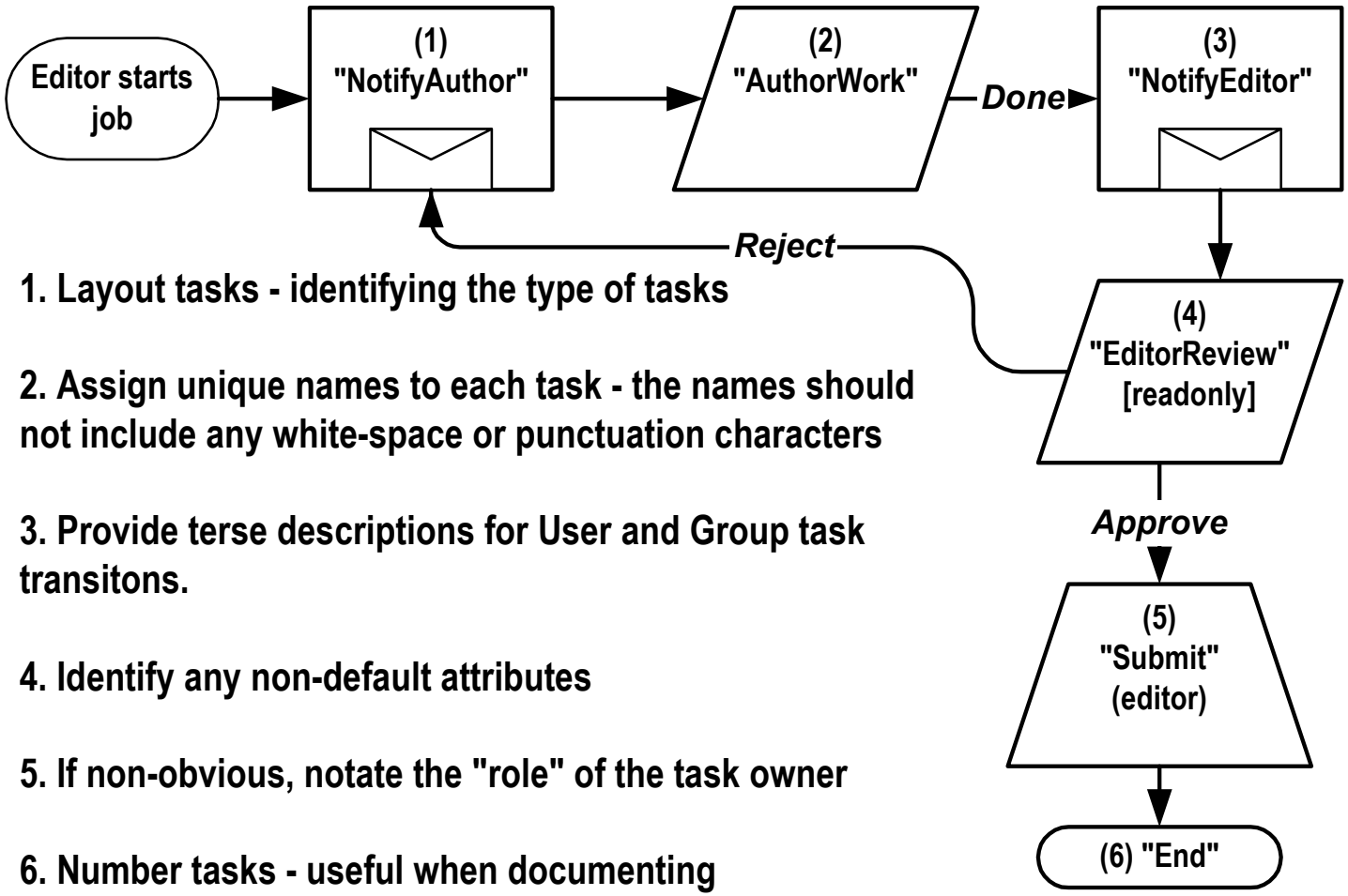
DSHS press release process
- + Time critical process
- + Anywhere from 1 to 50 a day
- + Email and pager notification

Steps:
- + Director of Communications and staff decides what and when to release
- + Assignment to a writer
- + works with experts (review/revise loop)
- + Writer finalization
- + Posted to shared location
- + reviewed by PIO officers, secretaries, gov's office (variable)
- + Esme gets as word file, does final formatting (using template)
- + Cindy gets final and makes HTML from template using DreamWeaver
- + Cindy sends word file to Access Washington (different process)
- + Output products: Word (archive), HTML (web), Fax, Email

Process Workflow

- Take each event and generate a simple diagram to document how the company responds to the event
  - Don't try to do them all
  - Don't go into too much detail to start with
  - Focus on the most important workflow types
- These diagrams will be the basis for your workflow development

Example: Process Workflow Diagram



1. Layout tasks - identifying the type of tasks

2. Assign unique names to each task - the names should not include any white-space or punctuation characters

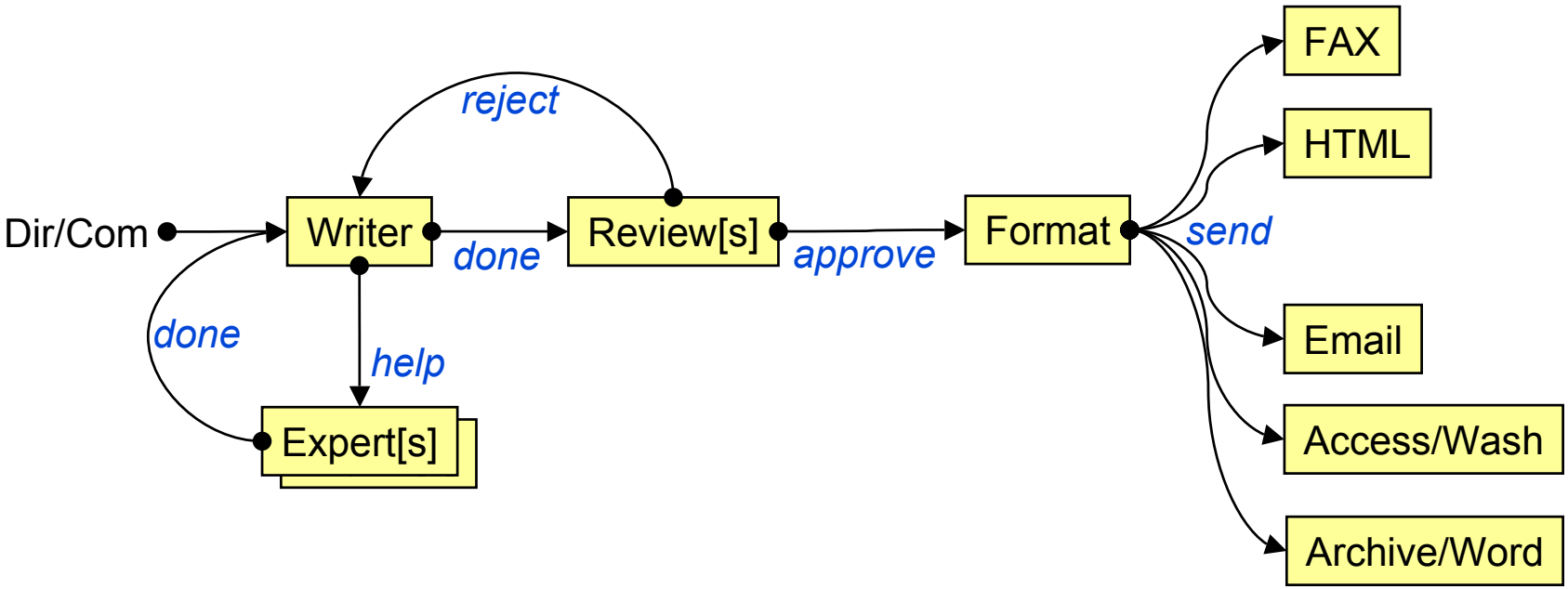
3. Provide terse descriptions for User and Group task transitons.

4. Identify any non-default attributes

5. If non-obvious, notate the "role" of the task owner

6. Number tasks - useful when documenting

DSHS Example: Press Release--Workflow Model



- This is a **business process** workflow model
- Next step: create a **TeamSite workflow diagram**

Validating Requirements

- You should periodically review your analysis of the requirements
  - The review can be conducted by representatives of the department's various content contributors, reviewers, etc
- Make sure there is agreement on the requirements before doing significant design work

Action Exercise: Goals, Content and Processes

- Within your group, spend 15 minutes discussing the following:
  - What are your content management concerns, goals and priorities?
  - What are the most common types of assets your group handles?
  - What processes do you currently use to develop content?
- After discussion, spend 30 minutes documenting the following:
  - Your group's 6 highest-priority ECM goals or concerns
  - The 5 most common types of content assets the group either works with or generates
  - a list of 3 common process scenarios, with one of them diagrammed
- Each group will then present their findings to the class one at a time

Action Item Discussion

- Class presentation
- Questions
- Take a few minutes to consider other group action items
  - Integrate theirs with yours if needed

TeamSite Templating In the Enterprise

Topic Objectives

- In this topic, we'll cover:
  - Templating capabilities and planning issues
  - Right and wrong choices for templating content generation
- The action planning at the end of this topic will be:
  - Identifying your group's template categories and types
  - Identifying possible reuse of templates between groups

TeamSite Templating

- You saw Templating in your user and template development training
- In this topic, we'll review some of the things we learned about templating, focusing on what we need to know to plan our use of templating for the agencies in the State of Washington government

Templating Categories and Types

- TeamSite templates are organized into **template categories** and **template data types**
- **Categories** are arbitrary divisions of templates
  - There can be one or more categories per TeamSite server
  - For instance, you might use one category, called **Products**, for all product-oriented templates, and another category, called **News**, for all external news releases
- Each category contains one or more **data types**
  - A data type is one template type
  - For instance, a press release would be one type, and a job posting a different type—both might be in the News category
- How you choose to organize your categories and types is a site-by-site decision—there are no defaults

Templating Types

- A **Type** is a kind of file that will be generated by templating
- A file type is a good candidate for TeamSite Templating generation if it:
  - Represents a type of file that is consistent in its format
  - Must be frequently created or changed
  - Does not require real-time content composition
  - Contains content that comes from workers who don't have content development skills
- The various Washington State agencies will need to establish a combined **Templating Philosophy** to determine what types of templates to create
- Consider the **Level of Effort** (**LOE**) v. the benefit returned when choosing template types

Example: TeamSite Templating Types

Type	Created by:
Press release	Marketing analyst
Product description	Product manager
News articles	Journalist
Job descriptions	HR specialist

- These are examples of good templating types, because:
  - They represent types of content that should have consistent look and feel
  - Are constantly being added to a website or corporate literature packs
  - Often should be created by people who don't know how to do general web or print publishing

What Can TeamSite Templating Do?

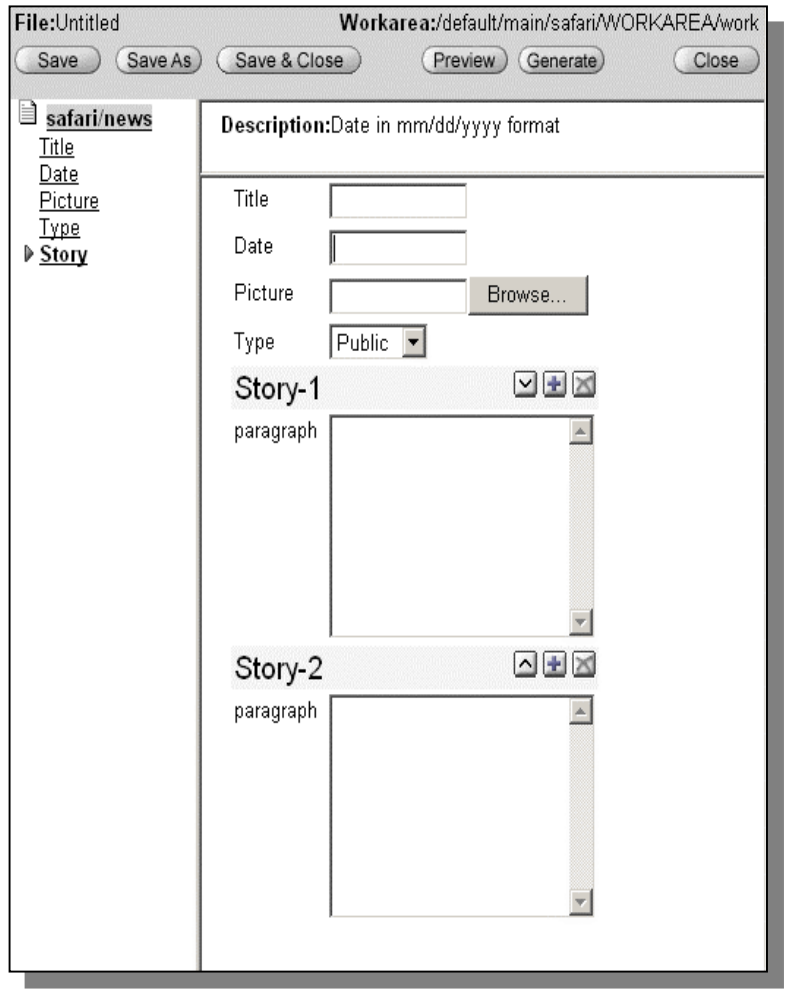
- Capabilities:
  - Provide a simplified method for generating content
  - Generate any type of content—web, print, graphical, etc
  - Provides a simple data entry system based on user forms
  - Includes an extremely powerful content generator: the **presentation compiler**
  - The presentation compiler can use input from the user-supplied data in the data entry forms, as well as:
    - Database values
    - Automatically generated content
    - Reusable components and included files

Other Capabilities and Concepts

- Each data-type has one data capture form, but can have any number of different **output products**
  - An output product is a generated file or item, such as HTML, Word, a PDF document, an email message, etc
- By default, only text-formatted output is generated, but presentation templates can call on external tools to generate non-text products
  - Example: using Microsoft Word to generate Word .doc files, using FOP to generate .pdf files, etc

Data Capture Forms and Data Content Records

- The data capture form for a data type can contain fields for any number of pieces of information
- These fields can be text-based or selectors, such as radio buttons, etc
- The objective for the data capture form is to provide a very simple input medium that captures pure content, without formatting



Template Sharing and Re-Use

- When a user fills in a data capture form and saves a data content record (DCR), that DCR can be used to generate any number of different output products using any number of different formats
- If needed, a single output product could be generated using more than one DCR as an input
  - Example: a home page, with each section (news of the day, "hot" products, customer profile, etc) "sourced" from its own DCR
- Commonly-used elements of output can be stored as reusable presentation **components** and shared between different template types
- Static content (example: footers, etc) can be included automatically during output generation

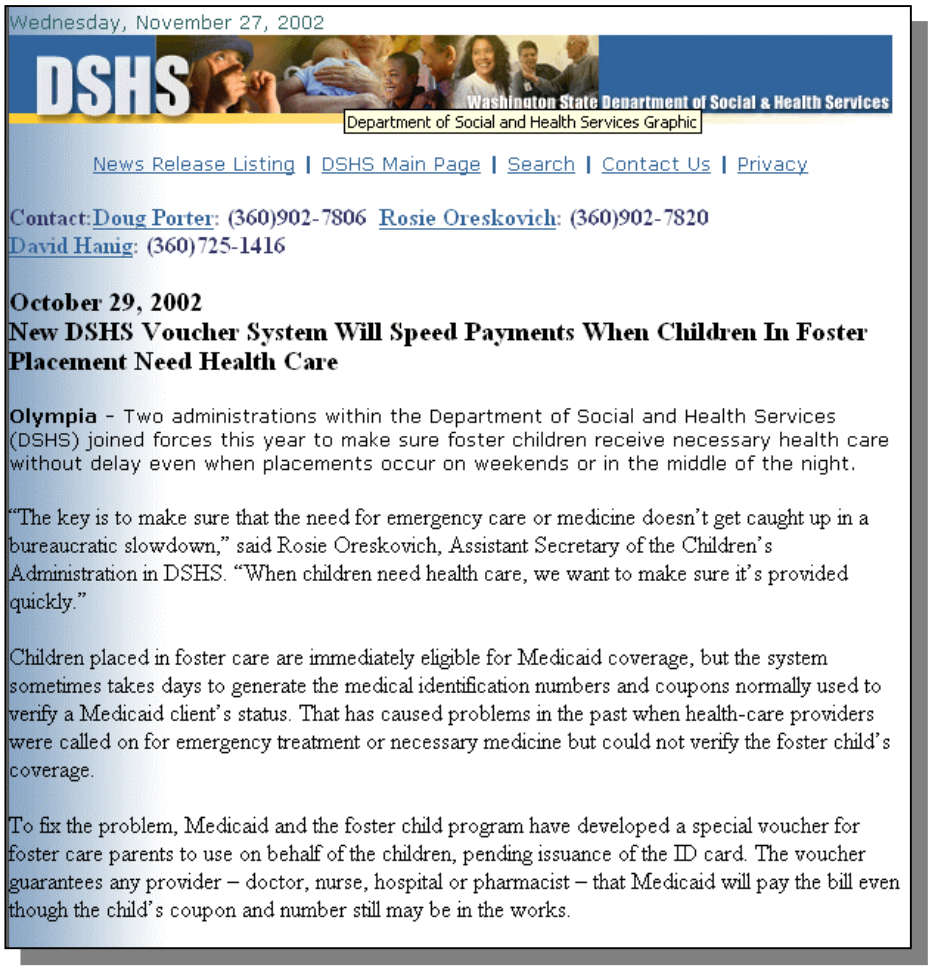
What Can TeamSite Templating *Not* Do?

- TeamSite Templating is a **development** tool, not a **run-time** tool
  - It does not run on your live web server, so it can't respond to run-time requests

Templating Categories

- Categories are arbitrary groupings of template types—you can choose any categorization scheme you like
- However, consider the following when planning categories:
  - Each category can have a defined set of users who can access the category, making it possible to control access to an entire set of types if needed
  - By default, all template categories apply to all branches in the TeamSite server—but we can add rules to restrict categories to selected branches if needed
  - Categories help end-users find the right template type quickly, and minimize the number of templates the user needs to choose from

DSHS Example: Press Release (Web)



Wednesday, November 27, 2002

DSHS — Washington State Department of Social & Health Services

Department of Social and Health Services Graphic

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Contact: Doug Porter: (360)902-7806 Rosie Oreskovich: (360)902-7820
David Hanig: (360)725-1416

October 29, 2002
New DSHS Voucher System Will Speed Payments When Children In Foster Placement Need Health Care

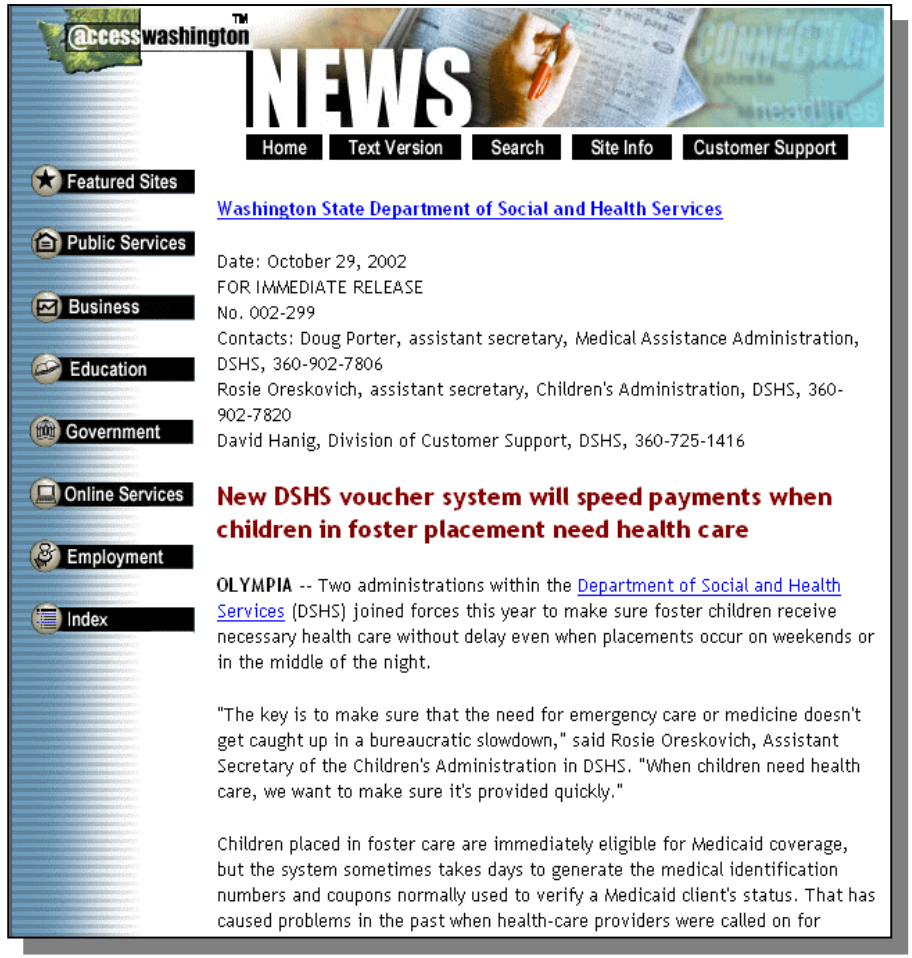
Olympia - Two administrations within the Department of Social and Health Services (DSHS) joined forces this year to make sure foster children receive necessary health care without delay even when placements occur on weekends or in the middle of the night.

"The key is to make sure that the need for emergency care or medicine doesn't get caught up in a bureaucratic slowdown," said Rosie Oreskovich, Assistant Secretary of the Children's Administration in DSHS. "When children need health care, we want to make sure it's provided quickly."

Children placed in foster care are immediately eligible for Medicaid coverage, but the system sometimes takes days to generate the medical identification numbers and coupons normally used to verify a Medicaid client's status. That has caused problems in the past when health-care providers were called on for emergency treatment or necessary medicine but could not verify the foster child's coverage.

To fix the problem, Medicaid and the foster child program have developed a special voucher for foster care parents to use on behalf of the children, pending issuance of the ID card. The voucher guarantees any provider – doctor, nurse, hospital or pharmacist – that Medicaid will pay the bill even though the child's coupon and number still may be in the works.

DSHS Web Site



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Washington State Department of Social and Health Services

Date: October 29, 2002
FOR IMMEDIATE RELEASE
No. 002-299
Contacts: Doug Porter, assistant secretary, Medical Assistance Administration, DSHS, 360-902-7806
Rosie Oreskovich, assistant secretary, Children's Administration, DSHS, 360-902-7820
David Hanig, Division of Customer Support, DSHS, 360-725-1416

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Access Washington

DSHS Example: Press Release (Word & Email)

<http://www.wa.gov/dshs/>Washington State Department of Social and Health Services

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Word file (for review/archive)

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Date: October 29, 2002
FOR IMMEDIATE RELEASE
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New DSHS voucher system will speed payments when children in
foster placement need health care

OLYMPIA -- Two administrations within the
<http://www.dshs.wa.gov/>Department of Social and Health Services
(DSHS) joined forces this year to make sure foster children
receive necessary health care without delay even when placements
occur on weekends or in the middle of the night.

"The key is to make sure that the need for emergency care or
medicine doesn't get caught up in a bureaucratic slowdown," said
Rosie Oreskovich, Assistant Secretary of the Children's
Administration in DSHS. "When children need health care, we want
to make sure it's provided quickly."

Children placed in foster care are immediately eligible for
Medicaid coverage, but the system sometimes takes days to
generate the medical identification numbers and coupons normally
used to verify a Medicaid client's status. That has caused
problems in the past when health-care providers were called on
for emergency treatment or necessary medicine but could not
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Email message

Notes on DSHS Press Release Template

- There are 4 output products, but only 1 source
- The Word file is not text-based, so would require some integration work to generate directly from templating
- The email message can be composed by templating, but an external tool will have to send it
  - We'll get into issues related to sending finished products out to their final destination later—let's focus on generating the content first
- We aren't looking at *process* here, just input data and output products
  - We'll deal with the process later, when we dive into workflow

Action item: Templating Data Types

- Within your group, spend 15 minutes discussing the following:
  - What are our potential templating types?
  - What output file types do we need?
  - What are out potential categories?
  - Where do we see reuse capabilities?
- After discussion, spend 30 minutes documenting the following:
  - List your categories and types
  - Per type, identify the output products by file type
  - Indicate which types have reuse or sharing potential
- Each group will then present their findings to the class one at a time

Action Item Discussion

- Class presentation
- Questions
- Take a few minutes to consider other group action items
  - Integrate theirs with yours if needed
- Now that you see your template types and those of other agencies, what cross-agency reuse or sharing issues exist?
  - Document them

End of Session

- This concludes today's session
- Next session: **December 11, 2002**
  - The develop-and-deploy model
  - TeamSite in the Enterprise
  - Branching Structures